

=> fil reg; d\_stat que l12

FILE 'REGISTRY' ENTERED AT 10:27:38 ON 16 FEB 2005  
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Property values tagged with IC are from the ZIC/VINITI data file  
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STRUCTURE FILE UPDATES: 15 FEB 2005 HIGHEST RN 831913-30-5  
 DICTIONARY FILE UPDATES: 15 FEB 2005 HIGHEST RN 831913-30-5

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

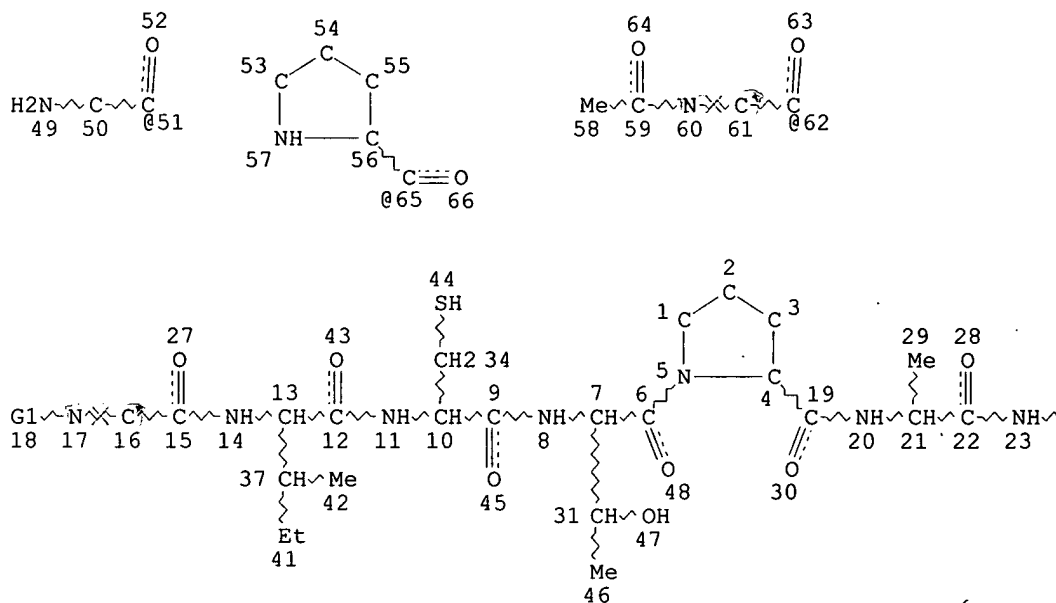
Please note that search-term pricing does apply when  
 conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

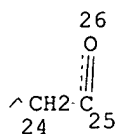
Experimental and calculated property data are now available. For more  
 information enter HELP PROP at an arrow prompt in the file or refer  
 to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

L10

STR



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Page 1-B

VAR G1=51/65/62  
 NODE ATTRIBUTES:

| NSPEC | IS | RC | AT |
|-------|----|----|----|
| 16    |    |    |    |
| 17    |    |    |    |
| 60    |    |    |    |
| 61    |    |    |    |

this structure covers  
 claims 788

DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 59

STEREO ATTRIBUTES: NONE  
L12 1 SEA FILE=REGISTRY SSS FUL L10 }

100.0% PROCESSED 202773 ITERATIONS  
SEARCH TIME: 00.00.03

1 ANSWERS }

=> d sqide l12

L12 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN

RN 318238-72-1 REGISTRY

CN L-Arginine, glycyl-L-lysyl-L-isoleucyl-L-cysteinyL-L-threonyl-L-prolyl-L-alanylglycyl-L-valyl-L-lysyl-L-cysteinyL-L-prolyl-L-alanyl-L-alanyl-L-leucyl-L-prolyl-L-cysteinyL-L-cysteinyL-L-prolylglycyl-L-leucyl-L-arginyl-L-cysteinyL-L-isoleucylglycylglycyl-L-valyl-L-asparaginyL-L-asparaginyL-L-lysyl-L-valyl-L-cysteinyL- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN 2: PN: WO0100841 SEQID: 2 claimed sequence

CN 41: PN: WO02098911 SEQID: 41 unclaimed sequence

FS PROTEIN SEQUENCE; STEREOSEARCH

SQL 33

PATENT ANNOTATIONS (PNTE):

Sequence |Patent

Source |Reference

=====+=====

Not Given|WO2001000841

|claimed

|SEQID 2

SEQ --1 GKICTPAGVK CPAALPCCPG LRCIGGVNNK VCR

MF C138 H240 N44 O37 S6

SR CA

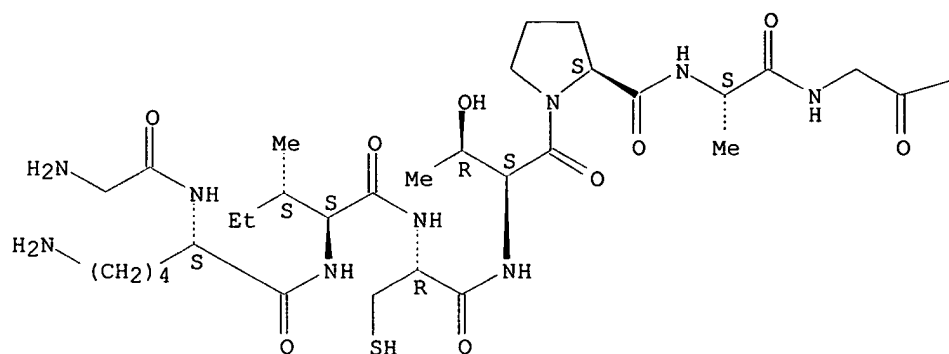
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

DT.CA CAlus document type: Patent

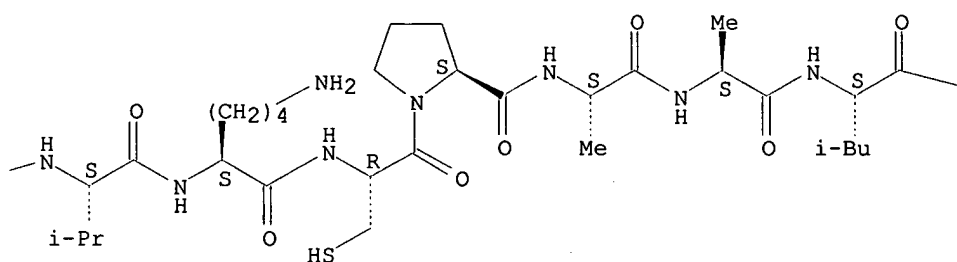
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); PRP (Properties); USES (Uses)

Absolute stereochemistry.

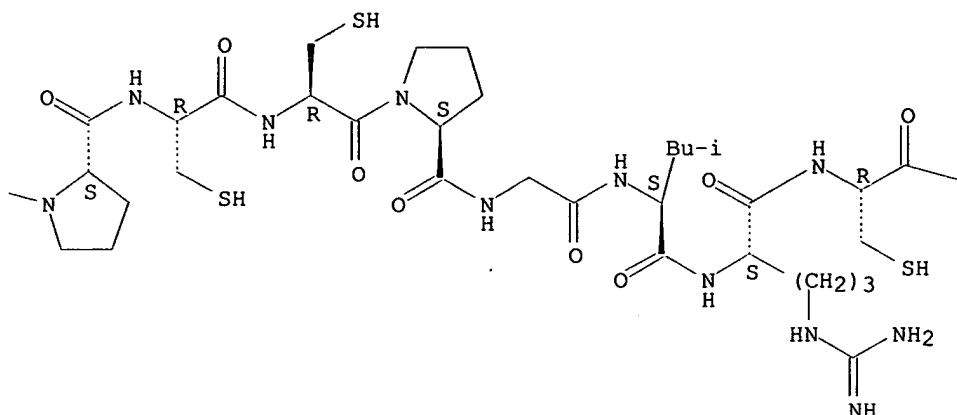
PAGE 1-A



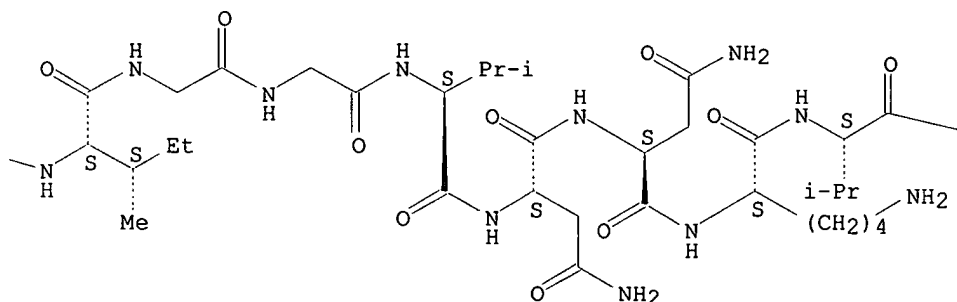
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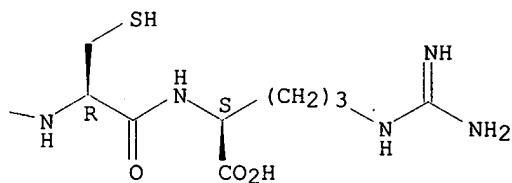
PAGE 1-C



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2 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> fil capl uspatf toxcenter; s l12  
 FILE 'CAPLUS' ENTERED AT 10:28:09 ON 16 FEB 2005  
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 CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

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L13 5 L12

=> dup rem l13

PROCESSING COMPLETED FOR L13

L14 3 DUP REM L13 (2 DUPLICATES REMOVED)  
 ANSWERS '1-2' FROM FILE CAPLUS  
 ANSWER '3' FROM FILE USPATFULL

=>-d-ibib ed abs hitrn 1-3; fil hom

L14 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1  
 ACCESSION NUMBER: 2002:946316 CAPLUS  
 DOCUMENT NUMBER: 138:20492  
 TITLE: Synthetic insecticidal proteins and synergistic combinations thereof for production of transgenic plants which are resistant to insect  
 INVENTOR(S): Vincent, Jason Leigh; Viner, Russell  
 PATENT ASSIGNEE(S): Syngenta Limited, UK  
 SOURCE: PCT Int. Appl., 67 pp..  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.             | KIND   | DATE     | APPLICATION NO. | DATE       |
|------------------------|--|----------|-----------------|------------|
| WO 2002098911          | A2   | 20021212 | WO 2002-GB2666  | 20020530   |
| WO 2002098911          | A3   | 20030410 |                 |            |
| W:                     | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW |          |                 |            |
| RW:                    | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG   |          |                 |            |
| CA 2445748             | AA   | 20021212 | CA 2002-2445748 | 20020530   |
| EP 1399473             | A2   | 20040324 | EP 2002-732931  | 20020530   |
| R:                     | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR   |          |                 |            |
| US 2004250313          | A1   | 20041209 | US 2004-478243  | 20040423   |
| PRIORITY APPLN. INFO.: |  |          | GB 2001-13900   | A 20010607 |
|                        |  |          | WO 2002-GB2666  | W 20020530 |

ED Entered STN: 13 Dec 2002

AB Invention relates to insecticidal peptides which are suitable for expression in plants. The invention provides synthetic insecticidal proteins which are capable of acting synergistically with further proteins, in particular insecticidal crystal endotoxin (CRY) and vegetative insecticidal protein (VIP) proteins. The insecticidal proteins of invention comprises an X-glycine (X-G) motif at the N-terminus, wherein X is any amino acid and wherein the insecticidal protein has at least 55% identity with a protein having the sequence XGKICTPAGVKCPAALPCCPGRLRCIGGVNN KVC. The present invention further provides and insecticidal protein variant which contains a motif depicted as -LPCCPG- and/or -ICTPA-. Also provided are polynucleotides encoding the proteins and plants which are capable of producing the proteins or protein combination. The proteins according to the invention are particularly suitable for the production of plants which are resistant and/or tolerant to insects.

IT 318238-72-1

## RL: PRP (Properties)

(unclaimed sequence; synthetic insecticidal proteins and synergistic combinations thereof for production of transgenic plants which are resistant to insect)

L14 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2001:12635 CAPLUS

DOCUMENT NUMBER: 134:96263

TITLE: Protein and cDNA sequences of a novel insecticidal endotoxin protein CRY from *Paecilomyces farinosus*  
 INVENTOR(S): Griffin, Jonathan; Carlile, Amanda Jane; Cayley, Patricia Jane; MacKay, Elaine Anne; Warner, Simon Anthony James; Vincent, Jason Leigh; Lee, Michael David

PATENT ASSIGNEE(S): Zeneca Limited, UK

SOURCE: PCT Int. Appl., 72 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND   | DATE     | APPLICATION NO. | DATE       |
|------------------------|--|----------|-----------------|------------|
| WO 2001000841          | A1   | 20010104 | WO 2000-GB2457  | 20000623   |
| W:                     | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |          |                 |            |
| RW:                    | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG   |          |                 |            |
| EP 1196585             | A1   | 20020417 | EP 2000-940623  | 20000623   |
| R:                     | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO   |          |                 |            |
| JP 2003503060          | T2   | 20030128 | JP 2001-506833  | 20000623   |
| PRIORITY APPLN. INFO.: |  |          | GB 1999-15215   | A 19990629 |
|                        |  |          | GB 1999-30536   | A 19991223 |
|                        |  |          | WO 2000-GB2457  | W 20000623 |

ED Entered STN: 05 Jan 2001

AB The present invention relates to insecticidal proteins, in particular proteins obtainable from *Paecilomyces* sp. such as *Paecilomyces farinosus*. In a preferred embodiment the invention provides insecticidal proteins having the amino acid sequence depicted as SEQ ID Number 1. The invention also provides an insecticidal synergistic protein combination comprising a first insecticidal protein according to the invention in combination with a further protein. Preferably the further protein is an insecticidal crystal endotoxin (CRY) protein. Also provided are polynucleotides encoding the proteins and plants which are capable of producing the proteins or protein combination.

IT 318238-72-1P

RL: AGR (Agricultural use); BPN (Biosynthetic preparation); PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses) (amino acid sequence; protein and cDNA sequences of a novel insecticidal endotoxin protein CRY from *Paecilomyces farinosus*)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 3 OF 3 USPATFULL on STN

ACCESSION NUMBER: 2004:316631 USPATFULL

TITLE: Insecticidal proteins and synergistic combinations thereof

INVENTOR(S): Vincent, Jason Leigh, Bracknell, UNITED KINGDOM  
 Viner, Russell, Bracknell, UNITED KINGDOM

|                     | NUMBER         | KIND | DATE          |
|---------------------|----------------|------|---------------|
| PATENT INFORMATION: | US 2004250313  | A1   | 20041209      |
| APPLICATION INFO.:  | US 2004-478243 | A1   | 20040423 (10) |
|                     | WO 2002-GB2666 |      | 20020530      |

|                       | NUMBER  | DATE     |
|-----------------------|---|----------|
| PRIORITY INFORMATION: | GB 2001-13900   | 20010607 |
| DOCUMENT TYPE:        | Utility   |          |
| FILE SEGMENT:         | APPLICATION   |          |
| LEGAL REPRESENTATIVE: | SYNGENTA BIOTECHNOLOGY, INC., PATENT DEPARTMENT, 3054<br>CORNWALLIS ROAD, P.O. BOX 12257, RESEARCH TRIANGLE<br>PARK, NC, 27709-2257 |          |
| NUMBER OF CLAIMS:     | 59  |          |
| EXEMPLARY CLAIM:      | 1   |          |
| NUMBER OF DRAWINGS:   | 3 Drawing Page(s)   |          |
| LINE COUNT:           | 2047  |          |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to insecticidal proteins. In a particular embodiment the invention provides an insecticidal protein having the amino acid sequence depicted as SEQ ID Number 1. The invention also provides an insecticidal synergistic protein combination comprising a first insecticidal protein according to the invention in combination with a further protein. Preferably the further protein is an insecticidal crystal endotoxin (CRY) protein. Also provided are polynucleotides encoding the proteins and plants which are capable of producing the proteins or protein combination. The proteins according to the invention are particularly suitable for the production of plants which are resistant and/or tolerant to insects.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 318238-72-1

(unclaimed sequence; synthetic insecticidal proteins and synergistic combinations thereof for production of transgenic plants which are resistant to insect)

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